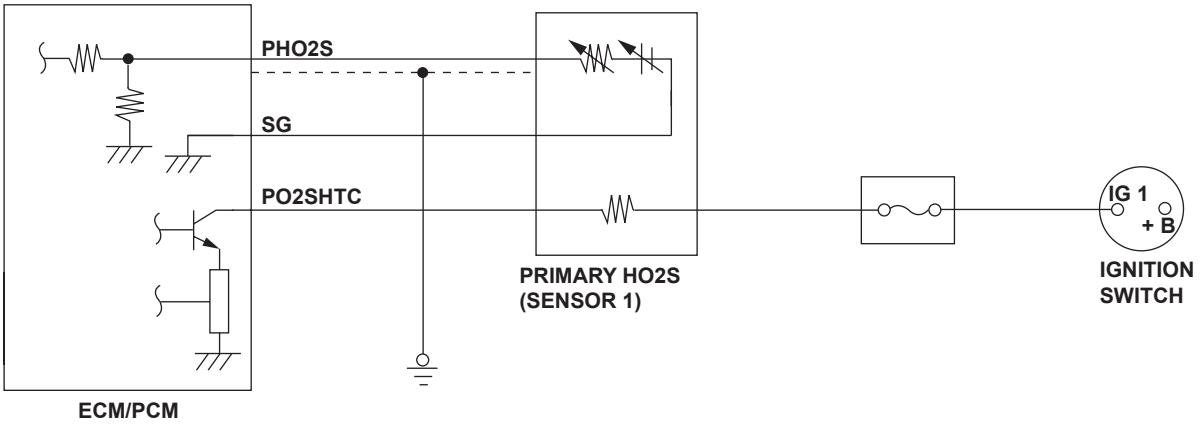
DTC P0135: Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Heater Circuit Malfunction



P0131-9801

General Description

A heater for the zirconia element is embedded in the primary heated oxygen sensor (primary HO2S) and is controlled by the engine control module (ECM)/powertrain control module (PCM). When activated, it heats the sensor to stabilize and speed up the detection of oxygen content when the exhaust gas temperature is cold.
If the primary HO2S heater draws more or less than a specified amperage, the ECM/PCM detects a malfunction and a DTC is stored.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Continuous
Sequence	None
Duration	5 seconds or more
DTC Type	One drive cycle, MIL ON

Enable Conditions

Condition	Minimum	Maximum
Engine coolant temperature	41ºF (5ºC)	—
Battery voltage (IGP terminal of ECM/PCM)	10.5 V	16.0 V
State of the engine	Running	
No active DTCs	Primary HO2S Heater, ECT	
Other	During primary HO2S heater operation	

Malfunction Threshold

The current is 171 mA or less or 1,800 mA or more for at least 5 seconds when the heater is on.

Driving Pattern

Start the engine. Hold the engine at 3,000 rpm with no load (in park or neutral) until the radiator fan comes on.

Diagnosis Details

Conditions for illuminating the MIL
When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored in the ECM/PCM memory.

Conditions for clearing the MIL
The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.
The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.